

**EMMELINA ARGOTELES (MEYRICK, 1922) (LEP: PTEROPHORIDAE)  
– A NEWLY RECOGNISED BRITISH PLUME MOTH**

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**Abstract**

The plume moth *Emmelina argoteles* (Meyrick) (Lep.: Pterophoridae) is recorded new to the British fauna from Wicken Fen, Cambridgeshire in 2005 and 2006. The overseas distribution of *argoteles* and differentiation from *Emmelina monodactyla* are discussed.

**Introduction**

A moth trapping session on 24 June 2005 at Wicken Fen (National Trust), Cambridgeshire (VC29, O.S. grid reference TL 5670) with Stuart Read was largely uneventful due to poor weather. Amongst unidentified moths a brown plume moth taken at 125W mercury vapour light was retained for later confirmation. Expecting this individual to be a small *Emmelina monodactyla*, I was surprised to find on genitalic examination that this male specimen was a good match for *E. argoteles*, based on the illustration and description in Gielis (1996). The identification was confirmed by Cees Gielis (pers. comm.) and this record constitutes the first record for Britain of *Emmelina argoteles*.

During a further visit to Wicken Fen a year later on 5 July 2006 another (male) specimen of *E. argoteles* was obtained at MV light in the same compartment of the nature reserve (Sedge Fen).

**Taxonomic position and identification**

In his book, Gielis (*op. cit.*) describes *E. argoteles* as indistinguishable on external characters from the widespread *monodactyla*. Comparison of the Cambridgeshire specimens (Plate L) with a short reference series of *monodactyla* uncovers nothing to contradict this statement. The overlap in published wing spans of the two species is large: 18–27mm for *monodactyla* and 18–23mm for *argoteles*. However with a wing span of 19mm (both individuals) the Wicken specimens of *argoteles* may suggest that this species averages smaller than ‘typical’ East Anglian *monodactyla* (c22–25mm) and that this may provide an indicative (but far from conclusive) character for the species.

The male genitalia of the two European *Emmelina* species do differ significantly. Male *argoteles* (Plate M) can be readily identified by the broadened cucullar process of the left valve and shape and reduced saccular ornamentation of the right valve (Gielis, 1996). In contrast, the differences between the female genitalia of *argoteles* and *monodactyla* are small. Gielis cites a more developed ostium in *argoteles* and a greater width to the ostium and antrum structures.

In line with Gielis’ European treatise on the family, *Emmelina argoteles* should be listed after *monodactyla*, providing it the species number 1524a consistent with the Bradley (2000) checklist.

### Distribution and habitat

The occurrence of *Emmelina argoteles* in Britain is not surprising given the close proximity of its distribution in mainland Europe. The species has a discontinuous global range, being found as near as France (Normandy, the Alps and Bouches du Rhone), as well as Germany (Nordrhein-Westfalen and Pfalz), Austria, Spain (Vizcaya), Hungary and Corsica. Outside Europe the species occurs in the Far East in Japan and China (Cees Gielis, pers. comm.). The literature suggests that *Emmelina argoteles* may be typically more closely aligned with damper habitats than the widely distributed *monodactyla*; the latter is also recorded at Wicken Fen and was trapped alongside *argoteles*.

### Biology

*Emmelina argoteles* is poorly researched species with few published references. Its larval host plant preferences are similar to those of *monodactyla*, including *Calystega sepium* (L.) and *Ipomoea batans* L. (Yano, 1963). The former is a common plant at Wicken Fen. There is clearly a need for more work to understand the sympatric relationship between the two species.

### Remarks

With the recording of *Emmelina argoteles* at Wicken Fen in both of the last two years it seems likely that this species is a previously overlooked resident at the site. Further work is required to understand the full distribution of the species in the UK, its status and environmental needs. If the species can be confirmed as a breeding species its conservation status will need to be assessed.

### Acknowledgements

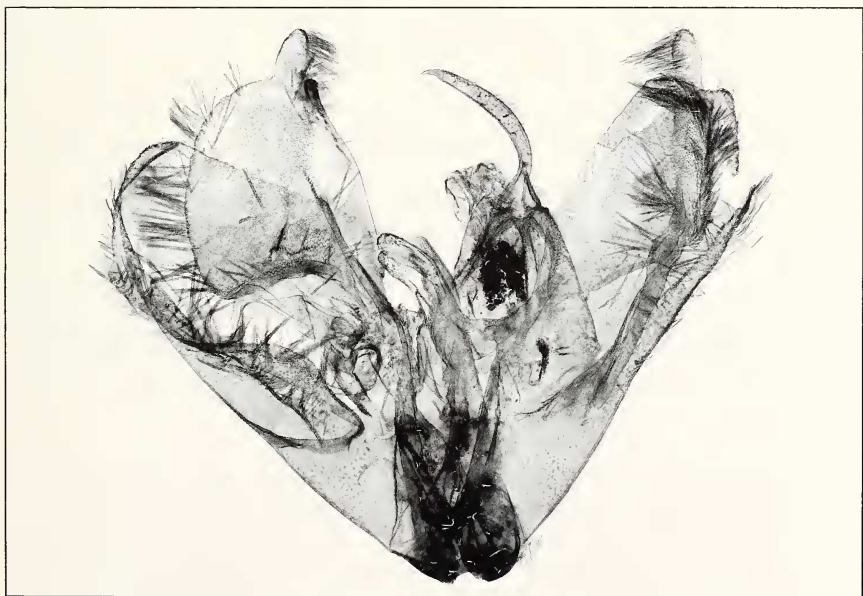
I am grateful to Cees Gielis for his confirmation of the first Wicken Fen specimen. Brian Goodey's skills in the preparation and photographing of the genitalia slide of the first specimen were critical in the confirmation of the record.

### References

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- Gielis, C., 1996. Pterophoridae. – In P. Huemer, O. Karsholt and L. Lyneborg (eds): *Microlepidoptera of Europe* 1: 1-222.
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**Plate L.** *Emmelina argoteles* (male), Wicken Fen, Cambridgeshire, 24 June 2005 (Photo: Jeff B. Higgott).



**Plate M.** *Emmelina argoteles* (male genitalia), Wicken Fen, Cambridgeshire, 24 June 2005 (Photo: Brian Goodey).